

CLAIMS

What is claimed is:

- 1 1. A hub and probe system in a wireless communications structure, comprising:
 - 2 (a) a hub for communicating at least one first signal, wherein the signal is
 - 3 communicated via evanescent waves created by an exciter;
 - 4 (b) a probe for receiving the signal;
 - 5 (c) conductive elements included in walls of the wireless communications
 - 6 structure for receiving at least one second signal from the probe, the
 - 7 conductive elements communicating the second signal to the exciter; and
 - 8 (d) wherein the second signal is passed back to the hub via the exciter.
- 1 2. The system as recited in claim 1, wherein at least one of the first signal and the
- 2 second signal is communicated to the hub from at least one of an external source
- 3 and an internal source.
- 1 3. The system as recited in claim 2, wherein at least one of the first signal and the
- 2 second signal includes information from at least one of a satellite television, a
- 3 cable television, an Internet provider, a computing device, a phone provider, a
- 4 DVD player, a television, and a telephone.
- 1 4. The system as recited in claim 2, wherein the external source includes information
- 2 communicated from outside the structure.
- 1 5. The system as recited in claim 2, wherein the internal source includes information
- 2 communicated from inside the structure.
- 1 6. The system as recited in claim 1, wherein the hub includes at least one of a
- 2 diplexer, a power amplifier, a transmitter, a receiver, a frequency converter, a
- 3 modem, a security controller, and a network processor.
- 1 7. The system as recited in claim 6, wherein the diplexer allows at least one of full
- 2 duplex transmission and half duplex transmission of data.

- 1 8. The system as recited in claim 7, wherein half duplex transmission is accomplished
- 2 by a transmit/receive switch.
- 1 9. The system as recited in claim 1, wherein the probe is connected to a remote
- 2 device that utilizes information included in at least one of the first signal and the
- 3 second signal.
- 1 10. The system as recited in claim 1, wherein at least one of the first signal and the
- 2 second signal are at a radio frequency between 0.5-100 MHz.
- 1 11. The system as recited in claim 1, wherein the first signal and the second signal are
- 2 at different radio frequencies.
- 1 12. A method for utilizing a hub and probe system in a wireless communications
- 2 structure, comprising the steps of:
 - 3 (a) communicating at least one first signal, wherein the signal is communicated
 - 4 via evanescent waves created by an exciter;
 - 5 (b) allowing a probe to receive the signal; and
 - 6 (c) receiving at least one second signal from the probe via the exciter, the
 - 7 exciter receiving the second signal from the probe via conductive elements
 - 8 in walls of the structure.
- 1 13. The method as recited in claim 12, wherein the at least one of the first signal and
- 2 the second signal is communicated from at least one of an external source and an
- 3 internal source.
- 1 14. The method as recited in claim 13, wherein at least one of the first signal and the
- 2 second signal includes information from at least one of a satellite television, a
- 3 cable television, an Internet provider, a computing device, a phone provider, a
- 4 DVD player, a television, and a telephone.
- 1 15. The method as recited in claim 13, wherein the external source includes
- 2 information communicated from outside the structure.

- 1 16. The method as recited in claim 13, wherein internal source includes information
2 communicated from inside the structure.
 - 1 17. The method as recited in claim 12, wherein at least one of a diplexer, a power
2 amplifier, a receiver, a frequency converter, a modem, a transmitter, a security
3 controller, and a network processor are included for communicating the first
4 signal.
 - 1 18. The method as recited in claim 17, wherein the diplexer allows at least one of full
2 duplex transmission and half duplex transmission of data.
 - 1 19. The method as recited in claim 18, wherein half duplex transmission is
2 accomplished by a transmitter switch.
 - 1 20. The method as recited in claim 12, wherein the probe is connected to a remote
2 device that utilizes information included in at least one of the first signal and the
3 second signal.
 - 1 21. The method as recited in claim 12, wherein at least one of the first signal and the
2 second signal are at a radio frequency between 0.5-100 MHz.
 - 1 22. The method as recited in claim 12, wherein the first signal and the second signal
2 are at different radio frequencies.